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STRUCTURE FILE UPDATES: 3 JUN 2002 HIGHEST RN 425364-64-3 DICTIONARY FILE UPDATES: 3 JUN 2002 HIGHEST RN 425364-64-3

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

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Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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STEREO ATTRIBUTES: NONE

L29	655	SEA	FILE=REGISTRY	SSS FUL	L27			
L35	466	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L29	AND	6/NR
L36	215	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L35	AND	1/N AND 10/O
L37	202	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L36	AND	1/NC
L38	122	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L37	NOT	TRI O METHYL
L39	80	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L37	NOT	L38
L40	22	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L39	NOT	DIMETHYLAMINO
L41	58	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L39	NOT	L40
L42	49	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L41	NOT	(BR OR CL OR F OR
		I)/E	ELS					
L43	35	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L29	AND	(C41H65NO10 OR
		C421	167NO10)					
L44	14	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L42	AND	L43
L45	11	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L44	NOT	(187169-95-5/BI OR
		1871	172-59-4/BI OR	187172-6	61-8/BI)			

=> d his

(FILE 'HOME' ENTERED AT 13:38:03 ON 05 JUN 2002) SET COST OFF

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                E JANSSEN H/AU
L1
            172 S E3-E23
L2
              1 S E44
L3
              1 S E71
                E HO K/AU
            526 S E3-E25
L4
                E HO KIE/AU
              4 S E3, E4
L5
                E NYSTRAND G/AU
              7 S E3-E5
L6
                E WILLIAMS D/AU
L7
           3452 S E3-E73
                E WILLIAMS DEX/AU
                E LAMB C/AU
             33 S E3, E12
L8
L9
            322 S LAMB C?/AU
                E LAMB S/AU
              9 S E3, E6
L10
           4491 S L1-L10
L11
           1417 S LOUSE
L12
                E LICE/CT
                E E3+ALL
L13
             26 S E1
                E E2+ALL
            296 S E6+NT
L14
L15
            133 S (P OR PEDICULUS) () HUMANUS
             35 S (P OR PEDICULUS) () HUMANUS () HUMANUS
L16
L17
              8 S PEDICULIDAE OR PTHIRIDAE
              4 S HEADLICE
L18
L19
              1 S HEADLOUSE
L20
              0 S L11 AND L12-L19
              0 S JOHNSON?/PA,CS AND L12-L19
L21
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L22
                STR
L23
              0 S L22
              0 S L22 FUL
L24
                SAV L24 LEVY841/A
L25
                STR L22
              0 S L25
L26
                DEL LEVY841/A
                STR L25
L27
             12 S L27
L28
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L29
                SAV L29 LEVY841/A
                STR L25
L30
L31
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L32
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L33
                STR L30
L34
              0 S L33 CSS SAM SUB=L29
            466 S L29 AND 6/NR
L35 .
            215 S L35 AND 1/N AND 10/O
L36
            202 S L36 AND 1/NC
L37
            122 S L37 NOT TRI O METHYL
L38
             80 S L37 NOT L38
L39
             22 S L39 NOT DIMETHYLAMINO
L40
             58 S L39 NOT L40
L41
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49 S L41 NOT (BR OR CL OR F OR I)/ELS
L42
             35 S L29 AND (C41H65NO10 OR C42H67NO10)
L43
             14 S L42 AND L43
L44
                SEL RN 3 4 7
             11 S L44 NOT E1-E3
L45
             24 S L43 NOT L45
L46
                SEL RN L45
L47
              4 S E4-E14/CRN
L48
              3 S L47 NOT C21H24CL2O4
     FILE 'HCAPLUS' ENTERED AT 14:15:16 ON 05 JUN 2002
L49
             65 S L45 OR L48
L50
             95 S SPINOSYN#
             75 S SPINOSYN# () (A OR D OR G)
L51
              9 S A83543A OR A83543D OR A83543G OR A83543()(A OR D OR G) OR A()
L52
L53
              4 S LEPICIDIN#
L54
            108 S L49-L53
                E SACCHAROPOLYSPORA/CT
L55
             20 S E12+NT
             31 S E12/BI
L56
                E E3+ALL
            583 S E5+NT
L57
L58
            829 S E5-E17/BI
                E E4+ALL
L59
            829 S L55-L58
              6 S PVM(L)MA (L) ?DECADIENE? (L) ?POLYM?
L60
              6 S L60 AND ?CROSS?
L61
     FILE 'REGISTRY' ENTERED AT 14:21:59 ON 05 JUN 2002
L62
              1 S 145314-10-9
              1 S 124-18-5
L63
              1 S 107-25-5
L64
              1 S 108-31-6
L65
            834 S 107-25-5/CRN
L66
L67
              2 S L66 AND 124-18-5/CRN
L68
              1 S L67 AND C4H2O3
              1 S L62, L68
L69
     FILE 'HCAPLUS' ENTERED AT 14:24:44 ON 05 JUN 2002
L70
             11 S L69
              32 S STABILEZE
L71
L72
             21 S STABILEZE() (06 OR 6)
L73
              0 S L54 AND L61,L70-L72
L74
              0 S L59 AND L61,L70-L72
           1297 S (MA OR MALEIC ANHYDRIDE) (L) (METHYLVINYLETHER OR POLYMETHYLVIN
L75
L76
              0 S L75 AND L54
              0 S L75 AND L59
L77
              0 S L11 AND L54, L59
L78
              0 S L11 AND L54, L59
L79
     FILE 'REGISTRY' ENTERED AT 15:15:48 ON 05 JUN 2002
                E BENZYL ALCOHOL/CN
L80
              1 S E3
                 E PENTYLENE GLYCOL/CN
               1 S E3
L81
                 E ISOPROPYL ALCOHOL/CN
               1 S E3
L82
                 E HEXYLENE GLYCOL/CN
L83
               1 S E3
                 E BUTYLENE GLYCOL/CN
               3 S E3
L84
                 E DIPROPYLENE GLYCOL/CN
L85
              1 S E3
```

```
E PROPYLENE GLYCOL/CN
L86
              1 S E3
                E CETERAYL ALCOHOL/CN
                E CETEARYL ALCOHOL/CN
              1 S E3
L87
                E CETEARETH/CN
F88
              1 S E6
                E STEARALKONIUM/CN
L89
              1 S E5
                E BHT/CN
L90
              1 S E3
                E SODIUM HYDROXIDE/CN
              1 S E3
L91
                E CETYL ALCOHOL/CN
L92
              1 S E3
                E STEARYL ALCOHOL/CN
L93
              1 S E3
L94
             19 S 36653-82-4/CRN AND 112-92-5/CRN
L95
              3 S L94 AND 2/NC
L96
              3 S L94 AND MXS/CI
L97
              1 S SILICA/CN
L98
              3 S (ACRYLIC ACID OR METHACRYLIC ACID OR ACRYLAMIDE)/CN
                SEL RN
L99
             89 S E1-E3/CRN AND HOMOPOLYMER AND 1/NC NOT IDS/CI
L100
             13 S L99 AND (C4H6O2 OR C3H4O2 OR C3H5NO)
L101
              9 S L100 AND 1/NC NOT (CYCLODEXTRIN OR OC4/ES OR TETRAZA? OR ALAN
L102
              1 S CELLULOSE/CN
              2 S (METHYLCELLULOSE OR HYDROXYBUTYL METHYLCELLULOSE OR HYDROXYPR
L103
L104
              3 S (METHYLCELLULOSE OR HYDROXYBUTYLMETHYLCELLULOSE OR HYDROXYPRO
L105
              3 S L103, L104
             26 S 9004-34-6/CRN AND BUTYL ETHER AND 2/NC
L106
L107
              3 S L106 AND C4H100
              1 S 56729-14-7
L108
                E DISTEARYL PHTHALICAMIDE/CN
L109
              1 S E2
                E PED 20 ITACONATE/CN
                E PEG 20 ITACONATE/CN
                E PEG-20 ITACONATE/CN
                E ITACONATE/CN
L110
              1 S E5
     FILE 'HCAPLUS' ENTERED AT 15:27:26 ON 05 JUN 2002
L111
              6 S L54, L59 AND L80-L93, L97, L98, L101-L105, L107-L110
L112
              5 S L111 NOT WASTE#/SC, SX
L113
             65 S L59 AND (1 OR 62 OR 63 OR 5 OR 15 OR 26)/SC
L114
              3 S L54 AND L113
L115
             24 S L54 AND L59
     FILE 'REGISTRY' ENTERED AT 15:31:33 ON 05 JUN 2002
L116
              1 S SPINOSAD/CN
     FILE 'HCAPLUS' ENTERED AT 15:31:47 ON 05 JUN 2002
L117
            193 S L116 OR SPINOSAD
              2 S L117 AND L80-L93, L97, L98, L101-L105, L107-L110
L118
              0 S L60, L70-L72, L75 AND L117
L119
L120
              3 S L114 AND (LICE OR LOUSE OR COCKROACH OR INSECT?)
              5 S L118, L120
L121
L122
              O S L54, L59 AND (NIT OR ANOPLUR?)
L123
              0 S L117 AND (NIT OR ANOPLUR?)
             39 S L54, L117 AND P/DT
L124
              9 S L124 AND US/PC
L125
                SEL DN AN 2 3 4 7 9
L126
              5 S L125 AND E1-E15
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FILE COVERS 1907 - 5 Jun 2002 VOL 136 ISS 23 FILE LAST UPDATED: 3 Jun 2002 (20020603/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d all tot 1129

L129 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:52080 HCAPLUS

DN 136:243281

- TI Fate of spinosad in litter and soils of a mixed conifer stand in the Acadian forest region of New Brunswick
- AU Thompson, Dean G.; Harris, Brenda J.; Lanteigne, Leonard J.; Buscarini, Teresa M.; Chartrand, Derek T.
- CS Canadian Forest Service, Great Lakes Forestry Centre, Sault Ste. Marie, ON, P6A 2ES, Can.
- SO Journal of Agricultural and Food Chemistry (2002), 50(4), 790-795 CODEN: JAFCAU; ISSN: 0021-8561
- PB American Chemical Society
- DT Journal
- LA English
- CC 5-4 (Agrochemical Bioregulators)
 Section cross-reference(s): 19
- Spinosad is a natural insecticide, produced via fermn. culture AB of the actinomycete Saccharopolyspora spinosa, with potential use against a no. of forest pests including spruce budworm (Choristoneura fumiferana [Clem]). Persistence of spinosad was detd. in terrestrial fate expts. conducted within a semimature stand of black spruce (Picea mariana [Mill.]) and balsam fir (Abies balsamea [L]) in the Acadian forest region of New Brunswick, Canada. Results of expts. established under full coniferous canopy and in a canopy opening indicated that spinosad dissipated rapidly following hyperbolic kinetics in both litter and soils and was not susceptible to leaching. Time to 50% dissipation ests. for spinosyn A ranged from 2.0 to 12.4 days depending upon matrix and exptl. conditions. Spinosyn D dissipated to levels below quantitation limits (0.02 .mu.g/g of dry mass) within 7 days in all cases. Sporadic low-level detection of the demethylated metabolites suggested that parent compds. were degraded in
- ST spinosad decompn leaching litter soil conifer forest
- IT Forests

(conifer; fate of spinosad in litter and soils of mixed conifer forest)

IT Decomposition

Insecticides

Leaching

Litter (organic matter)

Soils

(fate of spinosad in litter and soils of mixed conifer forest)

IT Fir (Abies balsamea)

Spruce (Picea rubens)

(fate of spinosad in litter and soils of mixed conifer forest comprising)

IT 168316-95-8, Spinosad

RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)

(fate in litter and soils of mixed conifer forest) IT 131929-60-7, Spinosyn A 131929-63-0, Spinosyn D RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process) (fate of spinosad in litter and soils of mixed conifer forest) ΙT 131929-61-8 149439-70-3 RL: FMU (Formation, unclassified); OCU (Occurrence, unclassified); FORM (Formation, nonpreparative); OCCU (Occurrence) (spinosyn D metabolite in studies of fate of spinosad in litter and soils of mixed conifer forest) RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD RE (1) Borth, P; Proceedings of the Beltwide Cotton Conferences 1996, V2, P690 (2) Boyd, M; Biol Contr 1998, V237, P154 (3) Busacca, J; Abstracts of the 50th North Central Branch of the Entomological Society of America 1995 (4) Cheng, H; Pesticides in the Soil Environment: Processes, Impacts and Modeling 1990, P530 (5) Colpitts, M; Forest Soils of New Brunswick 1995, P51 (6) Deamicis, C; Phytochemicals for Pest Control, ACS Symposium Series 658 1997, P144 HCAPLUS (7) Dow Agrosciences; Material Safety Data Sheet Tracer Naturalyte Insect Control MSDS 005499 1998, P4 (8) Dowelanco; Spinosad Technical Guide P25 (9) Draper, N; Applied Regression Analysis, 2nd ed 1981, P709 (10) Faber, M; J Agric Food Chem 1997, V45, P3672 HCAPLUS (11) Hale, K; J Environ Sci Health 1996, VB31, P477 HCAPLUS (12) Hedin, P; Phytochemicals for Pest Control; ACS Symposium Series 658 1997, P372 (13) Helson, B; For Chron 1992, V68, P349 (14) Jandel Scientific; Sigma Plot 4 for Windows User's Manual 1997 (15) Mackay, D; Environmental Chemistry of Herbicides 1991, VII, P281 (16) Murray, D; Aust Cottongrower 1997, V18, P62 (17) Pauli, B; Fenitrothion Risk Assessment; Canadian Wildlife Service Technical Report Series No 165 1993, P75 (18) Picot, J; Trans ASAE 1993, V36, P1013 (19) Pillmoor, J; Pestic Sci 1993, V39, P131 HCAPLUS (20) Rose, A; Insects of Eastern Spruces, Fir and Hemlock 1997, 23 (21) Salgado, V; Pestic Biochem Physiol 1998, V60, P01 (22) Sparks, T; Proceedings of the Beltwide Cotton Conferences 1996, V2, P692 (23) Stockdale, G; Abstracts of the 50th North Central Branch of the Entomological Society of America 1995 (24) Sundaram, K; J Agric Food Chem 1992, V40, P2523 HCAPLUS (25) Sundaram, K; Trans ASAE 1986, V29, P382 (26) Thompson, D; Pest Manag Sci, in press 2001 (27) Thompson, D; Pesticides and the Environment 2000, P11 (28) Thompson, G; Pest Manag Sci 2000, V56, P696 HCAPLUS (29) West, S; J Agric Food Chem 1997, V45, P3107 HCAPLUS (30) Yeh, L; J Agric Food Chem 1997, V45, P1746 HCAPLUS L129 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2002 ACS 2001:906108 HCAPLUS ΑN DN 136:16727 ΤI Aqueous pesticide dispersions IN Strom, Robert M.; Price, D. Claude; Lubetkin, Steven D. PA U.S. Pat. Appl. Publ., 5 pp., Cont.-in-part of U.S. Ser. No. 546,270, SO abandoned. CODEN: USXXCO DTPatent

LΑ English

ICM A01N025-00 IC

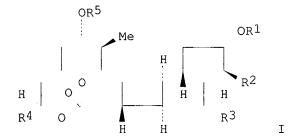
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NCL
    424405000
     5-4 (Agrochemical Bioregulators)
CC
FAN.CNT 2
     PATENT NO.
                      KIND DATE
                                          APPLICATION NO. DATE
                           _____
                                           -----
     US 2001051175
                            20011213
                                           US 2001-865360
PΤ
                      A1
                                                            20010525 <--
PRAI US 1999-128994P P
                            19990412
     US 2000-546270 B2
                           20000410
AΒ
     The bioavailability of a pesticide can be increased by formulating the
     pesticide as a stable aq. dispersion of particles in the micron or
     submicron range. The formulation is prepd. by blending a pesticide with a
     surfactant and water, followed by grinding. Such a formulation has the
     further advantage of reducing or eliminating the need for org. solvents.
     The stable aq. dispersion provides a means of prepg. a one part
     formulation of a plurality of pesticides which would be otherwise unstable
     in each other!s presence.
ST
     pesticide dispersion aq
ΙT
     Pesticide formulations
        (aq. pesticide dispersions)
     1912-24-9, Atrazine 133855-98-8 168316-95-8, Spinosad
     264257-62-7
     RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
        (aq. dispersion of)
L129 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2002 ACS
     2001:417130 HCAPLUS
ΑN
DN
     135:24710
TI
     Pour-on formulations for control of parasites in animals
ΙN
     Hacket, Kristina Clare; Lowe, Lionel Barry; Rothwell, James Terence
PA
     Eli Lilly and Company, USA
     PCT Int. Appl., 35 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
TC
     ICM C12N005-06
     ICS C12N005-08; A61K039-395; A61P035-00; A61K038-17; A61K047-48;
          A61K039-00; C12O001-02
CC
     63-6 (Pharmaceuticals)
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                           APPLICATION NO.
                                                            DATE
                      ____
PΙ
     WO 2001040446
                      A1
                            20010607
                                           WO 2000-US30143 20001117
                     A3
     WO 2001040446
                            20020117
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                           19991202
     A non-irritant topically acceptable carrier is selected from the group
     consisting of: (a) at least 1 of (i) tripropylene glycol Me ether and
     dipropylene glycol Me ether, and (ii) 1 of alc., wool wax, and propylene
     glycol, wherein (i) is present at 60% of the carrier; (b) (i) 1 of octyl
     palmitate, octyl stearate and glyceryl tricaprylate/caprate, and (ii) 1 of
     dioctyl succinate, iso-Pr myristate, cetearyl octanoate, propylene glycol
     myristyl ether propionate, iso-Pr palmitate, iso-Pr laurate, isocetyl
     stearate, oleic acid and Me oleate. Spinosad in octyl
     palmitate/iso-Pr myristate/dioctyl succinate at 10 mg/kg, with or without
     UV blockers, eradicated lice and at 2 mg/kg, it gave 85-98% efficacy.
```

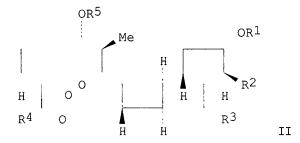
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ST
     carrier topical parasite animal; ester carrier topical parasite animal;
     alc carrier topical parasite animal; ether carrier topical parasite animal
TT
     Skin, disease
         (irritation; pour-on formulations for control of parasites in animals)
TT
     Bacillus thuringiensis
     Bovicola ovis
     Livestock
     Louse
     Sheep
         (pour-on formulations for control of parasites in animals)
ΙΤ
     Hormones, insect
     Macrolides
     Phosphates, biological studies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (pour-on formulations for control of parasites in animals)
     Alcohols, biological studies
·IT
     Glycerides, biological studies
     Lanolin
     Wool wax
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (pour-on formulations for control of parasites in animals)
ΙT
     Pyrethrins
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (pyrethroids; pour-on formulations for control of parasites in animals)
ΙT
     Drug delivery systems
        (topical; pour-on formulations for control of parasites in animals)
                         outoxide 60-51-5, Dimethoate 63-25-2, Carbaryl 114-26-1, Propoxur 121-75-5, Maldison 288-47-1
     51-03-6, Piperonyl butoxide
TT
     83-79-4, Rotenone
                                                                    288-47-1D,
                         290-87-9D, 1,3,5-Triazine, derivs.
     Thiazole, derivs.
                                                               299-84-3, ronnel
     299-86-5, crufomate 463-52-5D, Formamidine, derivs.
                                                              463-77-4D,
     Carbamic acid, derivs., biological studies
                                                  2921-88-2, Dursban
     52315-07-8, Zeta-cypermethrin 70288-86-7, Ivermectin
                                                               86479-06-3,
     Hexaflumuron 120068-37-3, Fipronil
                                             138261-41-3, Imidacloprid
     168316-95-8, Spinosad
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (pour-on formulations for control of parasites in animals)
TΨ
     57-55-6, Propylene glycol, biological studies 100-51-6,
     Benzyl alcohol, biological studies 110-27-0, Isopropyl myristate
     112-34-5, Diethylene glycol butyl ether
                                               112-62-9, Methyl oleate
     112-80-1, Oleic acid, biological studies
                                                 123-42-2, Diacetone alcohol
     142-91-6, Isopropyl palmitate 2915-57-3
                                                 10233-13-3, Isopropyl laurate
     22047-49-0, Octyl stearate 25339-09-7, Isocetyl stearate
                                                                  25498-49-1,
     Tripropylene glycol methyl ether
                                         29806-73-3
                                                      34590-94-8, Dipropylene
     glycol methyl ether
                           343326-67-0
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (pour-on formulations for control of parasites in animals)
L129 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
ΑN
     2001:208288 HCAPLUS
DN
     134:233088
TΙ
     Pesticidal macrolides
IN
     Lewer, Paul; Hahn, Donald R.; Karr, Laura L.; Graupner, Paul R.; Gilbert,
     Jeffrey R.; Worden, Thomas V.; Yao, Raymond C.; Norton, Dennis W.
PA
     Dow Agrosciences LLC, USA; Eli Lilly and Company
     PCT Int. Appl., 46 pp.
SO
     CODEN: PIXXD2
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DT

Patent

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LA
    English
    ICM C07H017-08
IC
     ICS A01N043-22; C12P019-62
CC
    5-4 (Agrochemical Bioregulators)
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                           APPLICATION NO.
                                                            DATE
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PΙ
    WO 2001019840
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                            20010322
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         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
             CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID,
             IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
            MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    BR 2000013963
                            20020514
                                           BR 2000-13963
                                                            20000913
                      Α
PRAI US 1999-153513P
                       Ρ
                            19990913
                            20000913
    WO 2000-US25060
                      W
OS
    MARPAT 134:233088
GΙ
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- AB Macrolide compds. I and II (Markush included) produced by culturing Saccharopolyspora species LW107129 (NRRL 30141) have insecticidal and acaricidal activity and are useful intermediates for prepg. spinosyn analogs. Formulations contg. the said compds. are used to control lice infestation in humans.
- ST insecticide acaricide ectoparasiticide macrolide Saccharopolyspora louse
- IT Parasiticides

(ecto-; insecticidal and acaricidal macrolides produced by Saccharopolyspora)

IT Louse

(formulations contg. insecticidal and acaricidal macrolides produced by Saccharopolyspora, against)

IT Saccharopolyspora

(insecticidal and acaricidal macrolides produced by)

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IT
     Acaricides
       Insecticides
        (insecticidal and acaricidal macrolides produced by
        Saccharopolyspora)
TΤ
     Macrolides
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BUU (Biological use, unclassified); MFM (Metabolic
     formation); PRP (Properties); PUR (Purification or recovery); BIOL
     (Biological study); FORM (Formation, nonpreparative); PREP (Preparation);
     USES (Uses)
        (insecticidal and acaricidal macrolides produced by
        Saccharopolyspora)
                                                   330574-53-3P
IΤ
     330574-47-5P
                    330574-50-0P
                                   330574-52-2P
                                                                  330574-54-4P
     330574-55-5P
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                                                   330574-68-0P
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     330574-70-4P
                    330574-71-5P
                                   330574-72-6P
                                                   330574-73-7P
     330574-75-9P
                    330574-76-0P
                                   330574-77-1P
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     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BUU (Biological use, unclassified); MFM (Metabolic
     formation); PRP (Properties); PUR (Purification or recovery); BIOL
     (Biological study); FORM (Formation, nonpreparative); PREP (Preparation);
     USES (Uses)
        (insecticidal and acaricidal macrolides produced by
        Saccharopolyspora)
RE.CNT
              THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Broughton, M; US 5539089 A 1996 HCAPLUS
(2) Lilly Co Eli; EP 0375316 A 1990 HCAPLUS
L129 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2002 ACS
ΑN
     2001:136992
                 HCAPLUS
DN
     134:183496
TΙ
     Topical organic ectoparasiticidal formulations
ΙN
     Kassebaum, James Web; Pugh, Paul Thomas; Thompson, William Webster
PΑ
     Eli Lilly and Company, USA
SO
     PCT Int. Appl., 22 pp.
     CODEN: PIXXD2
\mathsf{DT}
     Patent
LA
     English
     ICM - A61K009-00
IC
CC
     63-6 (Pharmaceuticals)
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO.
                            _____
                      ____
                                            ______
                                            WO 2000-US19549 20000726
     WO 2001012156
                            20010222
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             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
                     ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
             YU, ZA,
                    KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
         RW: GH, GM,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                            20020529
                                           EP 2000-948749 20000726
     EP 1207851
                       Α1
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
PRAI US 1999-148508P
                      P
                            19990812
     WO 2000-US19549
                       W
                            20000726
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This invention provides topical ectoparasiticidal formulations comprising

an ectoparasiticide, preferably a pyrethroid or a spinosyn,

AΒ

a spreading agent that is a (C3-C6) branched alkyl (C10-C20) alkanoate, preferably iso-Pr myristate, and optionally a miscibilizing agent compatible with org. solvent systems, and methods of controlling an ectoparasite infestation on certain animals comprising topically applying such formulations to the animal. For example, a topical soln. contained spinosad (88.5 % active) 5.65, acetic acid 3, and iso-Pr myristate 91.35 %.

ST topical ectoparasiticide veterinary pyrethroid isopropyl myristate; spinosad isopropyl myristate soln ruminant ectoparasiticide

IT Fatty acids, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (C10-20, esters, with C3-6 branched alkanol; topical ectoparasiticidal veterinary formulations)

IT Soybean oil

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Me ester, miscibilizing agent; topical ectoparasiticidal veterinary
 formulations)

IT Louse

(control of; topical ectoparasiticidal veterinary formulations)

IT Parasiticides

(ecto-; topical ectoparasiticidal veterinary formulations)

IT Pyrethrins

IT Pet animal

Ruminant

(topical ectoparasiticidal veterinary formulations)

IT Drug delivery systems

(topical, solns.; topical ectoparasiticidal veterinary formulations) IT 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid,

64-18-6, Formic acid, biological studies biological studies 64 - 19 - 7, 65-85-0, Benzoic acid, biological Acetic acid, biological studies 79-09-4, Propionic acid, biological studies 100-51-6, studies Benzyl alcohol, biological studies 107-92-6, Butyric acid, biological studies 109-52-4, Valeric acid, biological studies 111-14-8, Enanthic acid 112-05-0, Pelargonic acid 112-37-8, Undecylic acid 112-80-1, 112-85-6, Behenic acid 122-99-6, Oleic acid, biological studies Ethylene glycol phenyl ether 124-07-2, Caprylic acid, biological studies 143-07-7, Lauric acid, 506-12-7, Margaric acid 142-62-1, Caproic acid, biological studies 334-48-5, Capric acid biological studies 506-30-9, Arachidic acid 506-46-7, Cerotic acid 506-48-9, Montanic 506-50-3, Triacontanoic acid 544-63-8, Myristic acid, biological acid 557-59-5, Lignoceric acid 638-53-9, Tridecylic acid 872-50-4, N-Methyl-2-pyrrolidinone, biological studies 1002-84-2, 5989-27-5, D-Limonene 73435-91-3, Ceroplastolic acid Pentadecylic acid RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (miscibilizing agent; topical ectoparasiticidal veterinary formulations)

IT 110-27-0, Isopropyl myristate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (spreading agent; topical ectoparasiticidal veterinary formulations)

IT 52315-07-8, Zeta-cypermethrin 168316-95-8, Spinosad

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (topical ectoparasiticidal veterinary formulations)

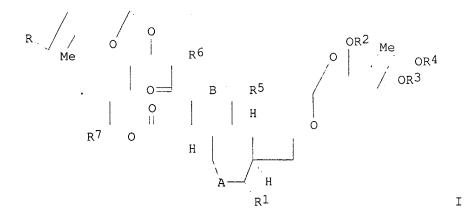
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

- (1) Bayer; EP 0069269 A 1983 HCAPLUS
- (2) Bayer; EP 0128351 A 1984 HCAPLUS
- (3) Nehezvegyipari; HU 41238 A 1987 HCAPLUS
- (4) Novartis; WO 0029378 A 2000 HCAPLUS
- (5) Wellcome Australia Ltd; AU 8177004 A 1982 HCAPLUS
- (6) Wellcome Australia Ltd; AU 8291850 A 1983 HCAPLUS
- (7) Wellcome Australia Ltd; AU 8321947 A 1984 HCAPLUS

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L129 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2002 ACS
      2001:136940 HCAPLUS
ΑN
DN
      134:158846
     Topical control of insect pests in companion animals
ΤI
      Snyder, Daniel Earl
ΙN
PΑ
      Eli Lilly and Company, USA
      PCT Int. Appl., 25 pp.
SO
      CODEN: PIXXD2
DT
     Patent
LA
     English
IC
      ICM A01N043-22
CC
      5-4 (Agrochemical Bioregulators)
FAN.CNT 1
      PATENT NO.
                          KIND
                                 DATE
                                                   APPLICATION NO. DATE
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                                 20010222
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      WO 2001011962
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               CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1999-148548P
                         Ρ
                                 19990812
     The invention provides single-dose topical formulations for controlling an
     ectoparasite infestation on a companion animal for a prolonged time,
      comprising a spinosyn, or a deriv. or salt thereof, and a
ST
      ectoparasiticide car dog rabbit horse
IT
      Fly (Diptera)
          (biting or nuisance; topical control of insect pests in companion
         animals)
TT
      Parasiticides
          (ecto-; topical control of insect pests in companion animals)
TΤ
     Cat (Felis catus)
     Ctenocephalides felis
     Dog (Canis familiaris)
     Horse (Equus caballus)
     Housefly (Musca domestica)
     Insecticides
        Louse
     Mite and Tick
     Mosquito
     Rabbit
     Stomoxys calcitrans
          (topical control of insect pests in companion animals)
ΙT
     131929-60-7, Spinosyn A
                                    168316-95-8,
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (topical control of insect pests in companion animals)
                THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Anzeveno, P; US 6001981 A 1999 HCAPLUS
(2) Dowelanco; WO 9309126 A 1993 HCAPLUS
(3) Dowelanco; WO 9420518 A 1994 HCAPLUS
(4) Dowelanco; WO 9700265 A 1997 HCAPLUS
(5) Huber, M; US 5591606 A 1997 HCAPLUS
(6) Huber, M; US 5631155 A 1997 HCAPLUS
(7) Huber, M; US 5767253 A 1998 HCAPLUS
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(8) Lilly, C; EP 0375316 A 1990 HCAPLUS
(9) Lilly, C; EP 0968706 A 2000 HCAPLUS
(10) Mynderse, J; US 5202242 A 1993 HCAPLUS
L129 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN
     2000:12619 HCAPLUS
DN
     132:69122
TΙ
     Hair formulations containing spinosyn for controlling human
     lice
ΙN
     Snyder, Daniel Earl
PΑ
     Eli Lilly and Company, USA
SO
     Eur. Pat. Appl., 15 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
     ICM A61K007-06
IC
     ICS A01N043-22; A61K031-35
     62-7 (Essential Oils and Cosmetics)
     Section cross-reference(s): 63
FAN.CNT 1
     PATENT NO.
                      KIND DATE .
                                                              DATE
                                             APPLICATION NO.
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     EP 968706
                       A2
                             20000105
                                             EP 1999-305102
                                                               19990629
                      A3
     EP 968706
                             20010905
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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                                             WO 1999-US13925 19990621
     WO 2000001347
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU,
             SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, BF, BJ, CF, CG, CI, CM,
             GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9947004
                                             AU 1999-47004
                             20000124
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                                                               19990621
     BR 9911795
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                       Α
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     US 6063771
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     US 6342482
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PRAI US 1998-91658P
                       Ρ
                             19980702
     WO 1999-US13925
                       W
                             19990621
     US 1999-338116
                       A1
                             19990622
AΒ
     Safer pediculicidal formulations comprising a spinosyn, or a
     deriv. or salt and a carrier, and methods of controlling lice
     infestations in humans with these formulations are provided. Thus, a
     lotion contained polyvinylpyrrolidone 0.50, DMDM hydantoin 0.20,
     tetrasodium EDTA 0.13, citric acid 0.05, PEG-60 castor oil 0.50, hexylene
     glycol 4.00, dicetyldimethylammonium chloride 0.38, spinosyn
     A 0.50, and water qs to 100.00% by wt.
ST
     hair formulation spinosyn lice
ΙT
     Hair preparations
        (conditioners; hair formulations contg. spinosyn for
        controlling human lice)
IT
     Hair preparations
     Shampoos
     Surfactants
        (hair formulations contg. spinosyn for controlling human
IT
     Polysiloxanes, biological studies
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (hair formulations contg. spinosyn for controlling human
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lice)
TΤ
    Louse
        (head, infestation; hair formulations contg. spinosyn for
        controlling human lice)
ΙT
     Louse
       Louse (Pediculus humanus humanus)
     Pthirus pubis
        (infestation; hair formulations contg. spinosyn for
        controlling human lice)
ΤТ
     131929-60-7, Spinosyn A 168316-95-8,
     Spinosad
     RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (hair formulations contg. spinosyn for controlling human
        lice)
              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
       1
RE
(1) Anon; EP 0968706 A2 HCAPLUS
L129 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2002 ACS
ΑN
     1999:794364 HCAPLUS
DN
     132:35986
TΙ
     Preparation of spinosyn macrocyclic lactone aminodeoxy
   glycosides as insecticides and miticides
     Deamicis, Carl Vincent; Anzeveno, Peter Biagio; Martynow, Jacek G.;
ΙN
     McLaren, Kevin L.; Green, Frederick Richard, III; Sparks, Thomas C.;
     Kirst, Herbert A.; Creemer, Lawrence Camillo; Worden, Thomas V.;
     Schoonover, Joe Raymond, Jr.; Gifford, James Michael; Hatton, Christopher
     J.; Hegde, Vidyadhar B.; Crouse, Gary D.; Thoreen, Brian R.; Ricks,
     Michael J.
     Dow Agrosciences LLC, USA
PA
     U.S., 122 pp., Cont. of U.S. Ser. No. 662,549, abandoned.
     CODEN: USXXAM
DT
     Patent
LA
     English
IC
     ICM C07H017-00
NCL
     536007100
     33-7 (Carbohydrates)
     Section cross-reference(s): 5, 34
FAN.CNT 1
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                            DATE
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     US 6001981
                            19991214
                                            US 1997-968856
                                                             19971105 <--
PI
                       Α
PRAI US 1996-662549
                            19960613
OS
     MARPAT 132:35986
GΙ
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AΒ
        Title compds. I (A, B = single bond, double bond, epoxide linkage; <math>R = single bond, epoxide linkage; R = 
        alkylamino, ether; R1, R6 = H, Me; R2-R4 = alkyl, haloalkyl, alkanoyl, OH;
        R5 = H, alkyl, alkylamino, alkylhydroxylamino; R7 = Me, Et) are prepd. by
        modifying the compds. that are naturally produced from Saccharopolyspora
        spinosa. The compds. of the invention have been shown to have activity
        against insects and mites. The compds. are prepd. by modifying the
        rhamnose sugar, modification of the forosamine sugar, or starting with
        pseudo-aglycon and then replacement with a nonsugar deriv. or different
        sugar, modification of the 5, 6, 5-tricyclic and 12-membered macrocyclic
        lactone part of the compds. naturally produced or of the pseudo-aglycon of
        the natural compds. Thus, 2'-O-trifluoroacetyl spinosyn Q was
        prepd. and tested as a control of Stomoxys calcitrans (stable fly) and
        Phormia regina (blow fly) with 100% of ASF killed at 100 ppm.
ST
        Phormia regina insecticide spinosyn glycoside prepn; Stomoxys
        calcitrans insecticide spinosyn glycoside prepn; amino acid
        spinosyn aminodeoxy glycoside prepn; miticide spinosyn
        macrocyclic aminodeoxy glycoside prepn; Saccharopolyspora spinosa
        spinosyn purifn; spinosyn macrocyclic aminodeoxy
        glycoside prepn insecticide
ΙT
        Caseins, uses
        RL: CAT (Catalyst use); USES (Uses)
             (hydrolyzates; soy broth; prepn. of spinosyn macrocyclic
             lactone aminodeoxy glycosides as insecticides and miticides)
IT
        Acaricides
        Insecticides
        Phormia regina
        Saccharopolyspora spinosa
        Stomoxys calcitrans
             (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
             as insecticides and miticides)
        Amino acids, preparation
        Glycosides
        RL: BAC (Biological activity or effector, except adverse); BSU (Biological
        study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
             (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
             as insecticides and miticides)
IT
        187165-87-3P
                                187165-89-5P
                                                         187166-24-1P
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        RL: BAC (Biological activity or effector, except adverse); BPN
        (Biosynthetic preparation); BSU (Biological study, unclassified); RCT
        (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
        (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES
        (Uses)
             (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
             as insecticides and miticides)
ΙT
        814-68-6P, Acryloyl chloride
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RL: BAC (Biological activity or effector, except adverse); BPN
(Biosynthetic preparation); BSU (Biological study, unclassified); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
PREP (Preparation); USES (Uses)
   (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
   as insecticides and miticides)
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     PREP (Preparation); USES (Uses)
        (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
        as insecticides and miticides)
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     RL: BAC (Biological activity or effector, except adverse); BPN
     (Biosynthetic preparation); BSU (Biological study, unclassified); SPN
     (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
     PREP (Preparation); USES (Uses)
        (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
        as insecticides and miticides)
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     (Occurrence); PREP (Preparation); RACT (Reactant or reagent)
        (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
        as insecticides and miticides)
ΙT
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     252576-26-4P
     RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides
        as insecticides and miticides)
IT
     149092-02-4, Spinosyn M
                                149092-03-5, Spinosyn N
     RL: CAT (Catalyst use); USES (Uses)
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(prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides as insecticides and miticides) ΙT 55-22-1, Isonicotinic acid, reactions 56-37-1, Benzyltriethylammonium 62-23-7, p-Nitrobenzoic acid 64-67-5, Diethyl sulfate chloride 65-85-0, Benzoic acid, reactions 75-03-6 75-30-9, 2-Iodopropane 76-02-8, Trichloroacetyl chloride 79-04-9, Chloroacetic chloride 79-30-1, Isobutyroyl chloride 85-52-9, 2-Benzoylbenzoic acid 100-09-4, 4-Methoxybenzoic acid 102-36-3, 3,4-Dichlorophenyl isocyanate 103-82-2, Phenylacetic acid, reactions 104-01-8, 4-Methoxyphenylacetic 104-03-0, 4-Nitrophenylacetic acid 106-95-6, Allyl bromide, 106-96-7, Propargyl bromide 107-08-4, 1-Iodopropane reactions 108-95-2, Phenol, reactions 109-01-3, 1-Methylpiperazine 110-85-0, 110-87-2, 3,4-Dihydro-2H-pyran Piperazine, reactions 110-91-8, 110-94-1, Glutaric acid 111-24-0, Morpholine, reactions 1,5-Dibromopentane 118-91-2, o-Chlorobenzoic acid 288-32-4, Imidazole, 298-06-6 329-15-7, (p-Trifluoromethyl)benzoyl chloride reactions 351-35-9, 3-Trifluoromethylphenylacetic acid 358-23-6, Trifluoromethanesulfonic anhydride 407-25-0, Trifluoroacetic anhydride 420-37-1, Trimethyloxonium tetrafluoroborate 475-11-6, N-Methyl proline 513-38-2, 1-Iodo-2-methylpropane 536-66-3, 4-Isopropylbenzoic acid 541-41-3, Ethyl chloroformate 542-69-8, 1-Iodobutane 542-85-8, Ethylisothiocyanate 545-06-2, Trichloroacetonitrile 589-57-1, Diethyl 590-17-0, Bromoacetonitrile chlorophosphite 593-71-5, Chloroiodomethane 598-21-0, Bromo acetyl bromide 619-84-1, 4-Dimethylaminobenzoic acid 622-78-6, Benzylisothiocyanate 623-47-2, Ethyl propiolate 624-83-9, Methyl isocyanate 625-80-9, Diisopropyl 628-17-1, 1-Iodopentane 628-21-7, 1,4-Diiodobutane sulfide 628-77-3, 1,5-Diiodopentane 701-99-5, Phenoxyacetyl chloride 762 - 49 - 2, 947-84-2, 1-Bromo-2-fluoroethane 922-67-8, Methyl propiolate 2-Phenylbenzoic acid 1118-68-9 1142-20-7 1798-09-0, 3-Methoxyphenylacetic acid 1877-73-2, 3-Nitrophenylacetic acid 1878-65 -5, 3-Chlorobenzeneacetic acid 1878-66-6, 4-Chlorophenylacetic acid 1972-28-7, Diethyl azodicarboxylate 2438-04-2, 2-Isopropylbenzoic acid 2444-36-2, 2-Chlorobenzeneacetic acid 2524-04-1, Diethyl chlorothiophosphate 2605-67-6, Carbomethoxymethylene triphenylphosphorane 3282-30-2, Pivaloyl chloride 3303-84-2 4124-30-5, Dichloroacetic anhydride 4530-20-5 4755-77-5, Ethyl oxalyl chloride 5292-43-3, tert-Butyl bromoacetate 5416-93-3, 4-Methoxyphenyl isocvanate 5470-11-1, Hydroxylamine hydrochloride 5799-67-7, Dimethyl (methylthio) sulfonium tetrafluoroborate 5807-30-7, 3,4-Dichlorobenzeneacetic acid 6226-25-1, 2,2,2-Trifluoroethyl 6482-24-2, 2-Methoxyethyl bromide 6575-24-2, trifluoromethanesulfonate 2,6-Dichlorophenylacetic acid 7051-34-5, (Cyclopropyl)methyl bromide 10493-44-4, 4-Bromo-1,1,2-trifluorobutene 10511-51-0, N-Benzyl-3-indolecarboxaldehyde 13057-17-5, Bromomethyl methyl ether 15674-67-6 16911-89-0, Phenyl chlorodithioformate 17341-93-4, 2,2,2-Trichloroethyl chloroformate 17476-04-9, Lithium tri-tert-butoxyaluminum hydride 19719-28-9, 2,4-Dichlorophenylacetic 20980-22-7, 2-(1-Piperazinyl)pyrimidine 27578-60-5. 1-(2-Aminoethyl)-piperidine 27607-77-8, Trimethylsilyl triflate 34819-86-8 35037-73-1, 4-(Trifluoromethoxy)phenyl isocyanate 35661-39-3 35737-10-1 36239-09-5, Ethyl malonyl chloride 50533-97-6. 4-Dimethylamino piperidine 59025-55-7, 2,4-Difluorophenyl isocyanate 69980-52-5 63864-94-8 68641-49-6 73899-14-6 81290-20-2, Trifluoromethyl(trimethyl)silane 92367-11-8 135192-53-9, Pentafluorophenylchlorothionoformate 145490-75-1 187165-73-7 187171-49-9 252576-04-8 252576-05-9 252576-08-2 252576-15-1 252576-28-6 252576-31-1 252576-32-2 RL: RCT (Reactant); RACT (Reactant or reagent) (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides as insecticides and miticides) ΙT 187166-57-0P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent) (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides as insecticides and miticides) 252576-30-0P TΤ RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (prepn. of spinosyn macrocyclic lactone aminodeoxy glycosides as insecticides and miticides) RE.CNT THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS RECORD RE (1) Aizawa; The Journal of Antibiotics 1979, V32(3), P193 HCAPLUS (2) Anon; JP 73-039922 (3) Anon; JP 71-028833 1971 (4) Anon; GB 2059767 1979 HCAPLUS (5) Anon; JP 55-000310 1980 (6) Anon; JP 59-151896 1984 HCAPLUS (7) Anon; JP 59-170092 1984 HCAPLUS (8) Anon; JP 60-160888 1985 HCAPLUS (9) Anon; EP 0214731 A3 1987 HCAPLUS (10) Anon; JP 62-226925 1987 HCAPLUS (11) Anon; JP 63-045280 1988 HCAPLUS (12) Anon; JP 63-045280 1988 HCAPLUS (13) Anon; EP 0375316 A1 1989 HCAPLUS (14) Anon; WO 9106552 1991 HCAPLUS (15) Anon; WO 9309126 1993 HCAPLUS (16) Baker; US 5227295 1993 HCAPLUS (17) Birch; Journal of the Chemical Society 1964, P5274 HCAPLUS (18) Boeck; 1991 HCAPLUS (19) Boeck; US 5362634 1994 HCAPLUS (20) Borchardt; Biochem & Biophys Res Comm 1979, V89(3), P919 HCAPLUS (21) Box; US 4421760 1983 HCAPLUS (22) Brode; Arzneim-Forsch 1986, V36(3), P437 HCAPLUS (23) Brown; J Liq Chromatography 1986, V9(4), P831 HCAPLUS (24) Bunge; US 4530835 1985 HCAPLUS (25) Celmer; US 4148883 1979 HCAPLUS (26) Celmer; US 4224314 1980 HCAPLUS (27) Celmer; J Chem Soc 1980, V102(12), P4203 HCAPLUS (28) Chen; ACTA Microbiol Sin 1981, V21(2), P192 HCAPLUS (29) Cram; Journal of American Chemical Society 1992, V114(6), P2260 (30) Cram; Organic Chemistry, 2nd Ed 1964, P204 (31) Datta, R; Biotechnol Bioeng 1977, V19(10), P1419 HCAPLUS (32) Drioli; Separation, Recovery and Purification in Biotechnology 1986, P52 **HCAPLUS** (33) Dybas; Brighton Crop Protection Conference 1988, P57 HCAPLUS (34) Evans; Asymmetric Synthesis of the Macrolide (+)-A83543A (Lepicidin) Aglycone (35) Fischer; Chem Ber 1920, V53, P2363 (36) Flynn; J Amer Chem Soc 1954, V76, P3121 HCAPLUS (37) Freiberg; US 3725385 1973 HCAPLUS (38) Fuller; Biochemical Pharmacology 1978, V27, P1981 HCAPLUS (39) Golik; US 5028536 1991 HCAPLUS (40) Greene; Protecting Groups in Organic Syntheses 1991, P17 (41) Hatori; US 4508647 1985 HCAPLUS (42) Ikeda; J Antibiotic 1985, V38(3), P436 HCAPLUS (43) Inanaga; Synthesis of Methynolide 21st 1978, P324 HCAPLUS (44) Ito; Tetrahedron Letters 1972, V12, P1185 (45) Iwasaki; US 4515942 1985 HCAPLUS (46) Jackson; Abstracts of the 1988 ICAAC 1988, P26026 (47) Jacobson, G; Biotechnology 1981, V1 HCAPLUS (48) Johnson; US 4560509 1985 HCAPLUS (49) Jomon; The Journal of Antibiotics 1972, V25(5), P271 HCAPLUS

(50) Julien; Clin Chem 1988, V34(5), P966 HCAPLUS

Charles of the state of the sta

- (51) Kirst; ACS Symposium Series, Synthesis and Chemistry of Agrochemicals III 1992, V504, P214 HCAPLUS
- (52) Kirst; Tetrahedron Letters 1991, V32(37), P4839 HCAPLUS
- (53) Kreuzman; J Biological Chemistry 1988, V263(30), P15626 HCAPLUS
- (54) Kubo; Analytical Letters 1985, V18(B3), P245 HCAPLUS
- (55) Kumagai; US 4764602 1988 HCAPLUS
- (56) Laby; US 4251506 1981 HCAPLUS
- (57) Liu; US 4213966 1980 HCAPLUS
- (58) Magerlein; US 4448970 1984 HCAPLUS
- (59) Mertz; Int J Syst Bact 1990, V40(1), P34
- (60) Mori; US 4206206 1980 HCAPLUS
- (61) Mrozik; US 4831016 1989 HCAPLUS
- (62) Myndesse; US 5202242 1993 HCAPLUS
- (63) Nakabayashi; Carbohydrate Research 1986, V150, PC7 MEDLINE
- (64) Nevin; US 4273920 1981 HCAPLUS
- (65) Nishikiori; US 5003056 1991 HCAPLUS
- (66) Omura; Macrolide Antibiotics, Chapter 1 1984
- (67) Omura; Macrolide Antibiotics, Chapter 13 1984
- (68) Oppici; US 4568740 1986 HCAPLUS
- (69) Pickett, J; Chemistry in Brittain 1988, P137 HCAPLUS
- (70) Sakakibara; US 4482707 1984 HCAPLUS
- (71) Sakano; J Antibiot (Tokyo) 1980, V33(7), P683 HCAPLUS
- (72) Schulman; Antimicrobial Agents and Chemotherapy 1987, V31(6), P964 HCAPLUS
- (73) Schulman; Journal of Antibiotics 1985, V38(11), P1494 HCAPLUS
- (74) Soma; US 4366308 1982 HCAPLUS
- (75) Synder; J Am Chem Soc 1984, V106, P787
- (76) Tatsuta; J Amer Chem Soc 1977, P5826 HCAPLUS
- (77) Toscaro; US 4514562 1985 HCAPLUS
- (78) Umezawa; Index of Antibiotics from Actinomycetes 1967, VII
- (79) Umezawa; Journal of Antibiotics 1980, V33(3), P15
- (80) Vedel; Biochem & Biophys Res Comm 1978, V85(1), P371 HCAPLUS
- (81) Walasek; US 2881162 1959 HCAPLUS
- (82) Whaley; US 4251511 1981 HCAPLUS
- (83) Whaley; US 4293651 1981 HCAPLUS
- (84) Whaley; US 4321329 1982
- (85) Whaley; Tetrahedron Letters 1980, V21, P3659 HCAPLUS
- (86) Yokoi; US 4501752 1985 HCAPLUS
- L129 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2002 ACS
- AN 1997:503831 HCAPLUS
- DN 127:105586
- TI Studies on the mode of action of spinosad, the active ingredient in Tracer insect control
- AU Salgado, Vincent L.; Watson, Gerald B.; Sheets, Joel J.
- CS DowElanco, Indianapolis, IN, USA
- SO Proc. Beltwide Cotton Conf. (1997), (Vol. 2), 1082-1084 CODEN: PCOCEN; ISSN: 1059-2644
- PB National Cotton Council
- DT Journal
- LA English
- CC 5-4 (Agrochemical Bioregulators)
- AB Studies defining the mode of action of spinosad are summarized, using the American cockroach as an exptl. insect. Spinosad is a naturally occurring mixt. of two closely related macrocyclic lactones, known as spinosyns, produced by the actinomycete Saccharopolyspora spinosa. In vivo studies showed that spinosyns caused widespread excitation of neurons in the central nervous system, leading to involuntary muscle contractions and tremors. At a threshold dose, spinosyn A was estd. by radiotracer measurements to reach an internal equiv. aq. concn. of approx.
 - 20 nM, and this concn. was sufficient to directly excite the isolated cockroach central nervous system. Furthermore, in isolated
 - neurons, the excitation was found to be due to persistent activation of

nicotinic acetylcholine receptors and prolongation of acetylcholine responses by a novel mechanism that distinguishes spinosad from all other nicotinic agonists. Under certain conditions, spinosyns also had effects on .gamma.-aminobutyric acid receptors, but their contribution to symptoms has not been established. Because of its novel mode of action, spinosad has an excellent resistance management profile; with no known cross-resistance, it can be rotated with all other classes of existing and exptl. products.

ST neurochem mechanism action spinosad insecticide cockroach

IT Biochemistry

(neurobiochem.; neurochem. mechanism of action of spinosad insecticide on cockroach)

IT Insecticides

Periplaneta americana

(neurochem. mechanism of action of spinosad insecticide on cockroach)

IT 168316-95-8, Spinosad

RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(neurochem. mechanism of action of spinosad insecticide on cockroach)

L129 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2002 ACS

AN 1993:515482 HCAPLUS

DN 119:115482

TI New A83543 compounds, their manufacture with Saccharopolyspora spinosa, and their use as insecticides and miticides

IN Creemer, Lawrence; Kirst, Herbert A.; Mynderse, Jon S.; Broughton, Mary
C.; Huber, Mary L. B.; Martin, James W.; Turner, Jan R.

PA Dowelanco, USA

SO PCT Int. Appl., 89 pp. CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H017-08

ICS C12P019-62; C12N001-20; A01N043-22

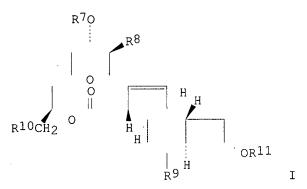
ICI C12N001-20, C12R001-01; C12P019-62, C12R001-01

CC 16-2 (Fermentation and Bioindustrial Chemistry)

Section cross-reference(s): 5

FAN.CNT 2

				KIND DATE					API	CATIC	NO.	DATE			
PI				A1 19930513 CA, JP, RU, SD,				WO 1992-US9684				19921109			
		RW: AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB, G	GR,	ΙE,	IT, LU	, MC,	NL,	SE
	US	5202242		Α		19930	0413		US	199	1-79	0287	1991	1108	<
	CN	1073483		A		19930	0623		CN	199	2-11	4318	1992	L107	
	AU	9331318		A1		19930	0607		ΑU	199	3-31	318	1992	L109	
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		R: DE,													
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	JP	06506477		Т2		19940	721		JP	199	3-50	8775	1992	L109	
	RU	2165704		C2		20010	0427		RU	199	3-58	364	1992	L109	
	US	5539089		Α		19960	723		US	199	4-30	1835	19940	907	<
PRA	I US	1991-790282		Α		1991	1108								
	US	1991-790287		А		1991	1108								
	US	1991-790	616	A		1991	L108								
	WO	1992-US9	684	Α		1992	L109								
	US	1993-137	697	B1		1993	1015								



(prepn. of, from A83543J)

(prepn. of, from A83543L)

149439-72-5P

RL: PREP (Preparation)

IT

New A83543 compds. (I; R7=H,amino sugar; R8-R10=H,Me; R11=H,neutral sugar) AB are manufd. with S. spinosa mutants for use as insecticides, miticides, or ectoparasiticides. By fermn. with A83543J- or A83543Q-producing S. spinosa mutant, seven A83543 compds. were manufd. Also N-demethyl A83543D was prepd. from A83543D by reaction with I2 in the presence of an inert solvent and a weak base. Also shown was the prepn. of pseudoaglycones from I by removal of the amino sugar with an acid, esp. sulfuric acid. A83543 compd insecticide miticide ectoparasiticide Saccharopolyspora; ST pseudoaglycone A83543 compd Saccharopolyspora ΙT Fermentation (A83543 compds., with Saccharopolyspora spinosa mutants) Acaricides IΤ Insecticides (from Saccharopolyspora spinosa mutants, A83543 compds. as) IT Saccharopolyspora spinosa (mutants, A83543 compds. manuf. with) IT Parasiticides (ecto-, from Saccharopolyspora spinosa mutants, A83543 compds. as) 7664-93-9, Sulfuric acid, uses IT RL: BIOL (Biological study) (in pseudoaglycones prepn. from A83543 compds.) 149092-03-5P, A 83543N ΙT 149092-01-3P, A 83543L 149092-02-4P, A 83543M 149438-29-9P, A 83543R 149438-30-2P, A 83543T 149438-28-8P, A 83543Q 149466-03-5P, A 83543S RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation) (manuf. of, with Saccharopolyspora spinosa mutant, for use as insecticides or miticides or ectoparasiticides) 149439-77-0P 149439-78-1P IT 149092-05-7P 149439-75-8P 149439-76-9P 149439-82-7P 149466-30-8P 149439-79-2P 149439-80-5P 149439-81-6P 149560-97-4P RL: PREP (Preparation) (prepn. of) 149439-70-3P ΙT RL: PREP (Preparation) (prepn. of, from A83543D by incubation with iodine, for use as insecticides or miticides or ectoparasiticides) ΤT 149439-71-4P RL: PREP (Preparation)

IT 149439-73-6P

RL: PREP (Preparation)

(prepn. of, from A83543M)

IT 149439-74-7P

RL: PREP (Preparation)

(prepn. of, from A83543N)

- L129 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2002 ACS
- AN 1991:80066 HCAPLUS
- DN 114:80066
- TI Novel macrolide insecticides from Saccharopolyspora spinosa
- IN Boeck, LaVerne Dwaine; Chio, Hang; Eaton, Tom Edward; Godfrey, Otis Webster, Jr.; Michel, Karl Heinz; Nakatsukasa, Walter Mitsuo; Yao, Raymond Che Fong
- PA Lilly, Eli, and Co., USA
- SO Eur. Pat. Appl., 78 pp.

CODEN: EPXXDW

- DT Patent
- LA English
- IC ICM C07H017-08

US 1989-429441

FI 1989-6053

Α

Α

19891030

19891218

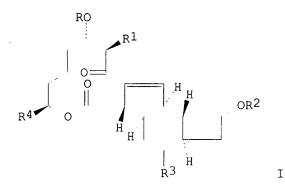
- ICS C12P019-62; C12N001-20
- ICI C12N001-20, C12R001-01; C12P019-62, C12R001-01
- CC 16-2 (Fermentation and Bioindustrial Chemistry)

Section cross-reference(s): 5, 10 FAN.CNT 2

r AN.		rent no.		KIND	DATE			PLICATION NO.	DATE	
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		R: AT,	BE,		, ES, FR,	GB,		IT, LI, LU, NI		
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		2005784			19990202					•
		8906420		А				1989-6420	19891218	
		8905096		A			NO	1989-5096	19891218	
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		8946891		A1	19900621		AU	1989-46891	19891218	
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		1043742		A	19900711		CN	1989-109377	19891218	
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		8906547		A	19900904			1989-6547	19891218	
		02223589		A2	19900905		JP	1989-328100	19891218	
		2535080		B2	19960918					
		8909680		A	19900926		z_A	1989-9680	19891218	
		290351		A5	19910529		DD	1989-335848	19891218	
		169756		A	19911221		IN	1989-CA1041	19891218	
		161476		В1	19930630			1989-282843	19891218	
		2065398		Т3	19950216		ES	1989-313195	19891218	
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		95601		С	19960226					
		285992		В6	19991215		CZ	1989-7170	19891218	
		106065		B1	19930226		RO	1989-143411	19891219	
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		96224		В	19960215					
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PRAI	US	1988-2865	591	A	19881219					

US 1991-773754 A3 19911010 US 1993-141174 B1 19931022 US 1995-406760 A1 19950317 MARPAT 114:80066

OS GI



AB Novel macrolide compds. A83543 (I; R=H, substituted sugar; R1, R3 = H, Me; R2 = (substituted) methoxy sugar, R4 = Me, Et) are manufd. by Saccharopolyspora spinosa. These compds. have insecticidal and miticidal activities against agricultural pests, particularly ectoparasites and may act systemically. A83543A and A83543D were prepd. from cells grown in a complex medium by extn. with MeOH and hydrophobic, high-performance, and reverse-phase chromatog. to recover 778 mg A83543A and 212 mg A83543D from 10 L medium. In tests on Southern armyworms A83543A was effective topically at 50 ppm on 1st and 2nd instar, but became less effective at later stages. When foliar applications on bushbeans were used the compd. was effective at 10 ppm up to 3rd instar.

ST A83543 insecticide miticide fermn Saccharopolyspora; ectoparasite systemic treatment A83543

IT Feed

(additives, ectoparasiticidal, compds. A83543 of Saccharopolyspora spinosa as)

IT Saccharopolyspora spinosa

(insecticidal and miticidal compds. A83543 manuf. with)

IT Fermentation

(insecticidal and miticidal compds. A83543, with Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543A pseudoglycone, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543A, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543B, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543C, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543D, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543E, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543F, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543G, from Saccharopolyspora spinosa)

IT Molecular structure, natural product

(of compd. A83543H, from Saccharopolyspora spinosa)

```
IT
     Molecular structure, natural product
        (of compd. A83543J, from Saccharopolyspora spinosa)
TΤ
     Acaricides
     Insecticides
        (systemic, compds. A83543 from Saccharopolyspora spinosa as)
IT
     Pharmaceutical dosage forms
        (injections, for compds. A83543, as systemic ectoparasiticides)
     131688-53-4DP, A 83543, substitution derivs. 131929-55-0P
IT
                                                                    131929-56-1P
                                   131929-59-4P 131929-60-7P,
     131929-57-2P
                   131929-58-3P
                131929-61-8P, A 93543B
                                         131929-62-9P, A
     A 83543A
     83543C 131929-63-0P, A 83543D
     131929-64-1P, A 83543E
                            131929-65-2P, A 83543F
                                                       131929-66-3P, A 83543H
     131929-67-4P, A 83543J
                              131929-68-5P, A 83543A
     Pseudoglycone 132016-82-1P, A 83543G
     RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP
     (Preparation)
        (manuf. of, with Saccharopolyspora spinosa)
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Crossover limits have been increased. See HELP CROSSOVER for details.
Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf
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             3 L130 NOT (L44 OR L48)
L:131
=> d ide can tot
L131 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS
     168316-95-8 REGISTRY
RN
CN
     Spinosad (9CI) (CA ÎNDEX NAME)
OTHER NAMES:
CN
     Conserve
CN
     Tracer
CN
     Tracer Naturalyte
MF
     Unspecified
CI
     COM, MAN
SR
LC
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       CSNB, MRCK*, PIRA, PROMT, TOXCENTER, USPATFULL
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L131 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS
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     Benzylic alcohol
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     Phenylmethyl alcohol
     Sunmorl BK 20
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FS
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       DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA,
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L131 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS
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CN
     (.+-.)-Propylene glycol
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     (RS)-1,2-Propanediol
CN
     .alpha.-Propylene glycol
CN
     1,2-(RS)-Propanediol
CN
     1,2-Dihydroxypropane
CN
     1,2-Propylene glycol
CN
     1000PG
CN
     2,3-Propanediol
CN
     2-Hydroxypropanol
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     DL-1,2-Propanediol
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     dl-Propylene glycol
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CN
     Methylethylene glycol
CN
     Monopropylene glycol
     PG 12
CN
CN
     Propylene glycol
CN
     Sirlene
     Solar Winter Ban
CN
CN
     Solargard P
CN
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       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,
       DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB,
       IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PIRA,
       PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN,
       USPAT2, USPATFULL, VETU, VTB
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